

PS18
Polytechnic Summit
2018. Lima - Perú

Transforming Higher Education in Engineering and Technology

UTEC
UNIVERSIDAD DE INGENIERÍA
Y TECNOLOGÍA



Winter is coming



So many signs...

59% of Gen Z (14 - 23 yrs.) prefer to use YouTube to learn, however, still 39% favor that a teacher directs the instruction

41% use apps and games to learn.

Source: Pearson (2018)

So many signs...

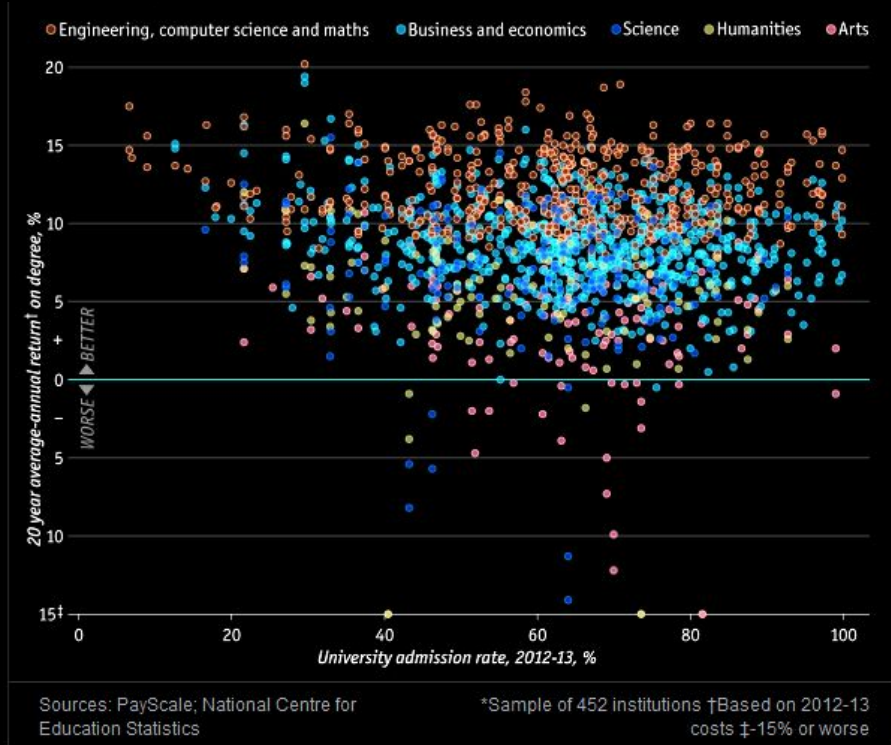
Less than **40%** of students enrolling for the first time at a four year college graduate in four years.

Source: Kevin Carey, The End of College (2015)

Only **26%** of working US Adults with college experience strongly agree that their education is relevant to their work and day-to-day life.

Source: Strada-Gallup. From College to Life (2017)

So many signs...



For how long will higher education be a **good investment?**

So many signs

41% felt higher education was meeting Industry's needs

43% agreed that higher education gave students the skills they needed to join the workplace

Source: IBM's Institute for Business Value, in conjunction with the Economist Intelligence Unit. Pursuit of Relevance Survey. 2017

40% of American employers say they cannot find people with the skills they need.

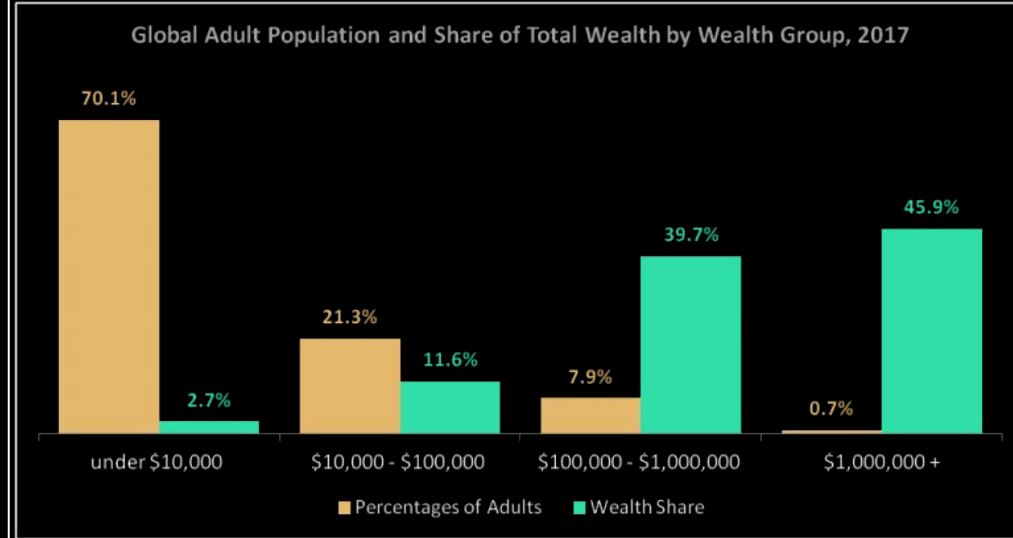
McKinsey. Closing the Skills Gap: Creating workforce-development programs that work for everyone. 2017



So many signs...

The 10 Top Skills That Will Land You High-Paying Jobs by 2020

1. Complex problem-solving
2. Critical thinking
3. Creativity
4. People management
5. Coordinating with others
6. Emotional intelligence
7. Judgment and decision-making
8. Service orientation
9. Negotiation skills
10. Cognitive flexibility



¹Future of Jobs Report. World Economic Forum. 2015

So many signs...

Top 5 Industries at Risk of Disruption

1. Media & Entertainment
2. Transportations
3. Financial Services
4. Education
5. Insurance

From the following eight economic sectors: Please rate from 1 to 8, where 8 is the most innovative and 1 the least innovative.

Sector	Avg. Rating
Gastronomy	6.3
Retail	5.2
Heavy industry	4.8
Banking	4.5
Agriculture	4.1
Mining	4.1
Insurance	3.8
Education	2.8

Source: State of Innovation Report, CB Insights. 2017

Source: UTEC Computer Science Students' Survey (645 students)
2018



Regulation

Signaling

A cinematic scene set in a vast, snowy, and mountainous landscape. In the foreground, a massive, dense formation of soldiers, dressed in dark, heavy winter combat uniforms, fills the lower half of the frame. They are standing in a grid-like pattern, facing away from the viewer towards the background. In the middle ground, a single, small figure of a person stands alone in the snow, looking towards the distant structures. In the background, there are several large, conical structures made of what appears to be ice or snow, resembling igloos or defensive fortifications. The overall atmosphere is cold, desolate, and imposing.

Winter is here

Google



NORDSTROM



Bank of America



They **do not** require college diploma for top jobs

A photograph of a classroom or lecture hall. In the foreground, the backs of several students' heads are visible as they sit at wooden desks. The desks are cluttered with papers, books, and electronic equipment like laptops and monitors. In the middle ground, a male teacher stands at the front of the room, facing the students. Behind him is a large green chalkboard with handwritten text in Spanish. The chalkboard text includes "NA COMPRE", "WILLIAM", "LIFE", "PROBLEMA", and "CONCEPTO". The classroom walls are decorated with various posters and a string of colorful prayer flags hangs from the ceiling. A large television screen is mounted on a stand in the background.

Is winter here?

— or —

a **real** opportunity
to change the
World?

New tools



Neuroscience & Data

59% of Gen Z and 66% of Millennials believe technology can transform the way college students learn in the future

Source: Pearson (2018)

We need to rethink our programs.

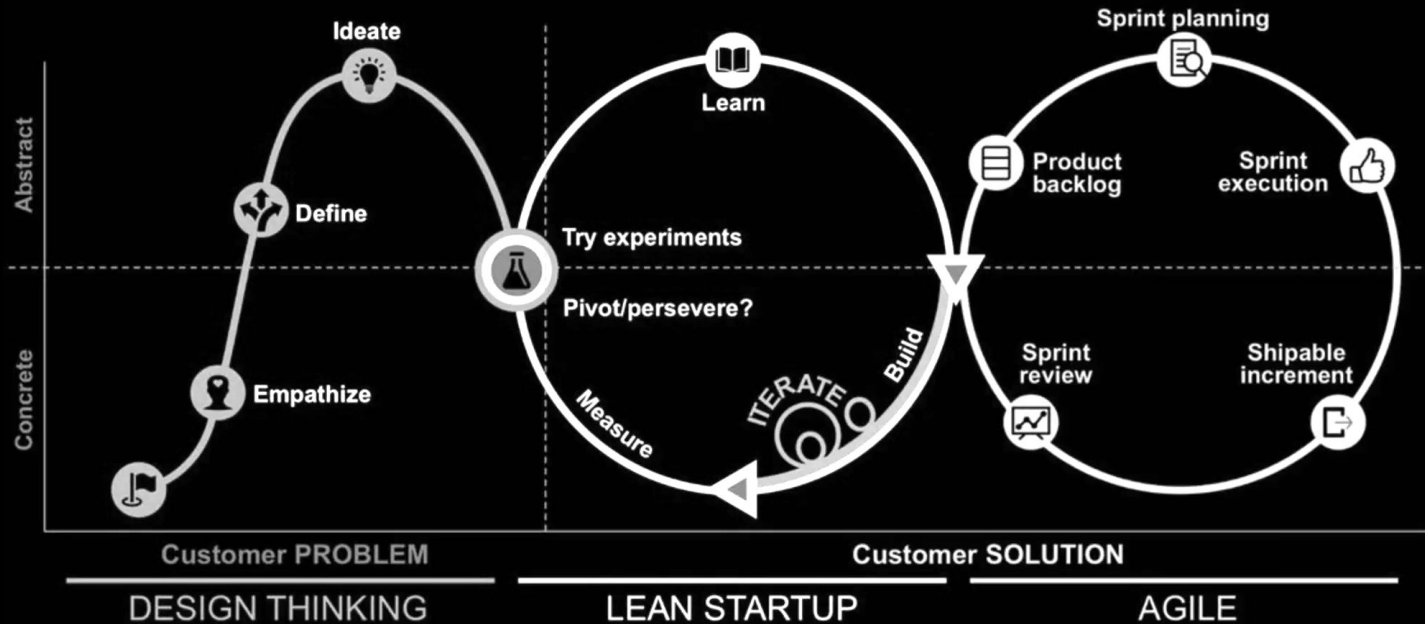


Not just a lot of pieces, but a comprehensive and effective one.

We need to **transform** the classroom into learning spaces



We need to incorporate **students** in the design and implementation of **new** models





We need to have professors that feel passion about teaching

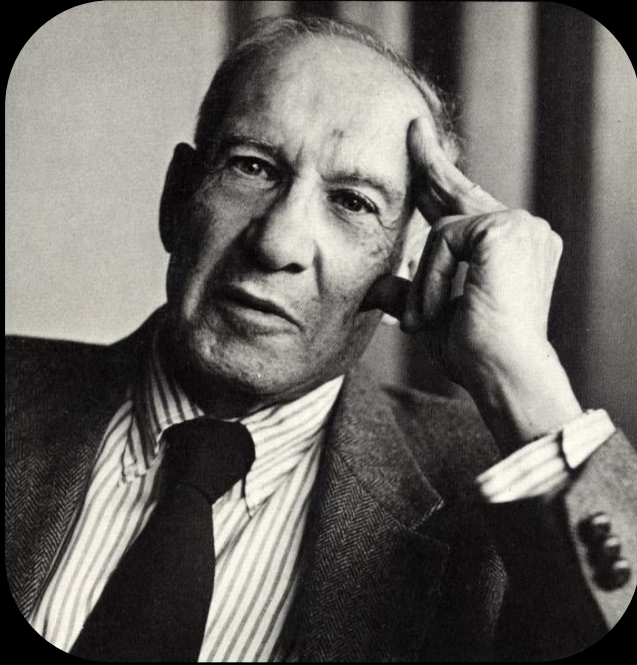
A large crowd of young people, mostly students, are gathered at an outdoor event. In the foreground, a young woman with glasses and a backpack is looking down at a smartphone. Other students are looking in various directions, some towards the camera. The background is slightly blurred, showing more people and some greenery.

We need to reduce the **cost** so we can reach **everybody**

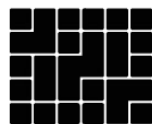
Around **70** million out of the **200** million people worldwide out of work are **young**.

Source: ILO

We should lead...



The best way to
predict your
future is to
create it.



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